



Earlier this month, an editorial team asked me the following question: What are Santee Cooper’s priorities for 2017? It’s a question to be expected at the start of a new year, and I didn’t hesitate in providing my answer.

First, Santee Cooper must do all we can to support completion of the ongoing expansion at V.C. Summer Nuclear Station. These new nuclear units will provide reliable, clean and safe electricity across South Carolina for generations to come. With Fluor Corp. now managing the construction of units 2 and 3, we hit several major milestones in 2016 and expect to continue that good progress this year.

Another focus will be continued protection of our physical and cyber assets. Beyond the recent U.S. presidential race, hackers have targeted U.S. industry for years and each attempt gets more sophisticated. Electric utilities are primary targets – both our physical and digital assets – and Santee Cooper is working with peer utilities and security experts to keep abreast of new threats and develop new tools to protect our assets.

Strategic planning and development of our infrastructure, specifically pipelines and wires, is also important as we look to 2017 and beyond – for all utilities. In particular for South Carolina and Santee Cooper, we need a long-term solution to the lack of natural gas infrastructure in the eastern half of the state. We also need to make sure the grid is developed to best serve growing and shifting populations.

The fourth priority is important because it will ensure success in the other three: continued workforce development. Santee Cooper has one of the best groups of employees in the industry – that I know. We have good training programs in place, and we have created educational partnerships externally to keep our talent pipeline full and prepare for anticipated retirements. Santee Cooper remains committed to developing our employees, both for their own advancement and so that we can continue serving South Carolina with affordable and reliable electricity, environmental stewardship, economic development and excellent customer service.

All the best in 2017.



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Photo by Paul Zoeller

Utility poles near the Oil Plant substation in Myrtle Beach were snapped in half during Hurricane Matthew, bringing down electric lines and equipment. Santee Cooper Line Technician A Jason Hucks and Line Technician B Cole Hickman work to free an insulator from a broken pole before replacing the pole and equipment.



RISING TO THE CHALLENGE OF HURRICANE MATTHEW

Hurricane Matthew caused widespread damage to Santee Cooper's system. Line crews worked 16-hour shifts to repair equipment and restore electricity to customers.

"We were all thinking, 'Please, not another Hugo.' During the first half of the storm, it was manageable.

Crews were able to work and restore a number of outages. Then the winds began howling, the ground was saturated and trees were uprooted. We even had poles snap from possible tornadoes. Large numbers of lines, breakers and circuits went down and the number of customers without power began to steadily climb.

We knew we had our work cut out for us."

– Mike Poston, Vice President of Retail Operations

By Nicole A. Aiello

Photography by Paul Zoeller

HURRICANE MATTHEW BATTERED THE CARIBBEAN AND HAD ITS SIGHTS SET ON SOUTH CAROLINA. AS THE FIRST DAYS OF OCTOBER PASSED, BUSINESSES AND RESIDENTS HAD NO CHOICE BUT TO PREPARE FOR HURRICANE FORCE WINDS. SANTEE COOPER EMPLOYEES PULLED OUT OUR EMERGENCY ACTION PLAN, A ROAD MAP FOR PREPARATION AND RESTORATION. WE TOOK THE NECESSARY PRECAUTIONS THE WEEK LEADING UP TO HURRICANE MATTHEW. THEN WE BRACED FOR THE STORM TO HIT.

At right: A sign on a Grand Strand church begs for Matthew's kindness. Santee Cooper Line Technician B Cole Hickman makes preparations for the hurricane. A man rides a bicycle down the deserted Myrtle Beach Boardwalk before the storm.

BEFORE THE STORM

With the threat of a Category 3 hurricane barreling toward South Carolina, officials were preparing for the worst. Gov. Nikki Haley declared a state of emergency on Oct. 4 and called for evacuation along the coast beginning Oct. 5. "Our goal is to make sure that you basically get 100 miles away from the coast," Gov. Haley said in a press conference.

Days before the storm was predicted to affect the state, grocery stores looked as if they had been looted as shelves were stripped bare of bread, milk, water and batteries. Lines of SUVs, pickup trucks and sedans clogged roads as drivers hoped they would make it to the pump before tanks went dry. Frustration and desperation were palpable as anxious gas station attendants taped handwritten out-of-gas signs to gas pumps.

Bands of clouds brought intermittent wind and rain throughout the Lowcountry and the Grand Strand as the edge of Hurricane Matthew blew

into South Carolina on Friday, Oct. 7. All of South Carolina was hoping the path the hurricane would follow was the one most agreed upon by meteorologists, taking a sharp right back out to sea, avoiding the coast. But there's a reason the area around the predicted path is referred to as the cone of uncertainty. And we were well within that cone.

Businesses boarded up their windows to guard against winds that could whip through the streets and piled sandbags in front of doorways in case of flooding.

And with approximately 2 million South Carolinians depending on the state-owned electric and water utility as their power source, either directly or through the state's electric cooperatives, Santee Cooper's Corporate Incident Management Team and other emergency action teams were in full preparation mode.



Transmission and distribution crews were industriously stocking and fueling line trucks and other fleet vehicles. Utility personnel were closely monitoring storm developments in the tropics and positioning crews for a quick response, to both the statewide transmission system and the local distribution system, based on the projected storm path and probable damage. Additional crews were on standby away from the coast, waiting to be called into action. Press releases and social media posts kept the public informed of what the utility was doing to prepare.

"We were prepared and we were safe," said Diane Bell, manager of distribution planning and technical operations, and a member of Santee Cooper's Corporate Incident Management Team. "We had personnel, trucks and equipment on standby. All we could do at that point was wait for the storm."



THE FURY OF THE STORM

The anticipation of the storm settled like a blanket over South Carolina as Friday dawned. Those who didn’t evacuate hunkered down, listening to the latest news reports.

Santee Cooper was a beehive of activity at its Storm Center in Horry County and its Emergency Operations Center in Berkeley County, both of which would become centers of operations for the upcoming week. Like firemen in a firehouse, line crews waited in their crew quarters to be dispatched. Winds were not yet strong enough to keep line crews at bay, and they jumped at the chance to fix scattered outages as they occurred.

As day broke on Saturday, Oct. 8, wind speeds increased. Santee Cooper crews continued working while it was safe to do so. By 9 a.m., higher wind speeds caused Santee Cooper transmission crews in the southern part of the state to cease line work. Distribution crews continued to work in Berkeley, Georgetown and Horry counties until stronger winds progressed to those areas.

Around 11 a.m., Hurricane Matthew made landfall near McClellanville as a Category 1 storm with sustained winds of 75 mph, and by 3 p.m. more than 30,000 Santee Cooper customers were without power. The hurricane continued

to push onward, and the landscape began to change dramatically as already saturated ground gave way and trees tumbled.

“We were cautiously optimistic at the beginning of the hurricane. At that point, it wasn’t much more than what we would experience during a large summer storm,” said Poston. “When the second half of the storm came ashore, it felt like a hurricane. Our own building shook and our system showed outages across the board as trees took out line after line. To ensure our line workers’ safety, we had to stand down and wait for the worst to be over.”

Although Santee Cooper expected there to be damage, reality was much worse than anyone anticipated.

By 6:30 p.m., more than 33 percent of Santee Cooper’s transmission system had been impacted. Transmission lines feed electricity from generating stations to the state’s electric cooperatives and the distribution system that keeps the lights on for our direct-serve customers. At the same time, more than 137,000 Santee Cooper residential and commercial customers were without power. The storm delivered the biggest hit to Santee Cooper’s system since Hurricane Hugo 27 years earlier.

Above:
A satellite image shows the scope of the storm.

At right:
Strong winds forced over utility poles on U.S. Highway 17 in Surfside Beach.

Scenes of damage, like this one on Atlantic Avenue in Garden City Beach, were widespread.

A vehicle succumbs to rising waters on U.S. Highway 501.



Santee Cooper customer Dayle Grimsley of Murrells Inlet hugs Santee Cooper Safety Specialist III Rose Foster after she helped start Grimsley's generator.



Opposite page, clockwise from top left:

A worker from a tree cutting crew saws through fallen trees on power lines on Sandy Island.

Santee Cooper Line Technician C William Brown and Crew Supervisor Larry Hall move a fallen utility pole on the south end of the Grand Strand.

Jason Taylor, Santee Cooper distribution controller III, helps control the flow of electricity in the Distribution Control Center in Myrtle Beach.

Line Technician A Jason Hucks and Line Technician B Cole Hickman free part of a broken pole from a utility line beside the Oil Plant substation in Myrtle Beach.

Brown, Hall and Line Technician A Bryant Geathers travel by boat to assess damage on Sandy Island.

IT TAKES TEAMWORK TO REBUILD

Hurricane Matthew left uprooted trees, broken poles, downed lines, flooding and sand-filled roads in its wake. More than 63,000 calls were received by Santee Cooper's trouble communication lines. The transmission system had 60 major structures that needed to be replaced, and there were more than 400 points where trees had taken down lines. The distribution system had 315 poles that needed to be replaced, as well as a significant number of crossarms, arrestors, insulators, fuses, transformers and other equipment that needed to be repaired.

"It's hard to describe the determination, resolve and grit that were demonstrated after the storm," said Vicky Budreau, then manager of transmission operations. "More than 1,000 people were involved in the 8-day restoration. The teamwork was incredible. Everyone was working together, around the clock, to restore power."

Bell and Poston also emphasized the power of teamwork. "We weren't going to stop until every customer who could receive power was energized," said Bell. "We had Santee Cooper crews in place and called in a large number of additional line and tree crews to assist us and to help speed up restoration. We had an incredible response from our sister APPA (American Public Power Association) mutual aid companies. The restoration would have taken a lot longer if they hadn't helped us out."

Poston added, "It was an all-hands-on-deck mentality, with many people pitching in and volunteering for tasks far different than their

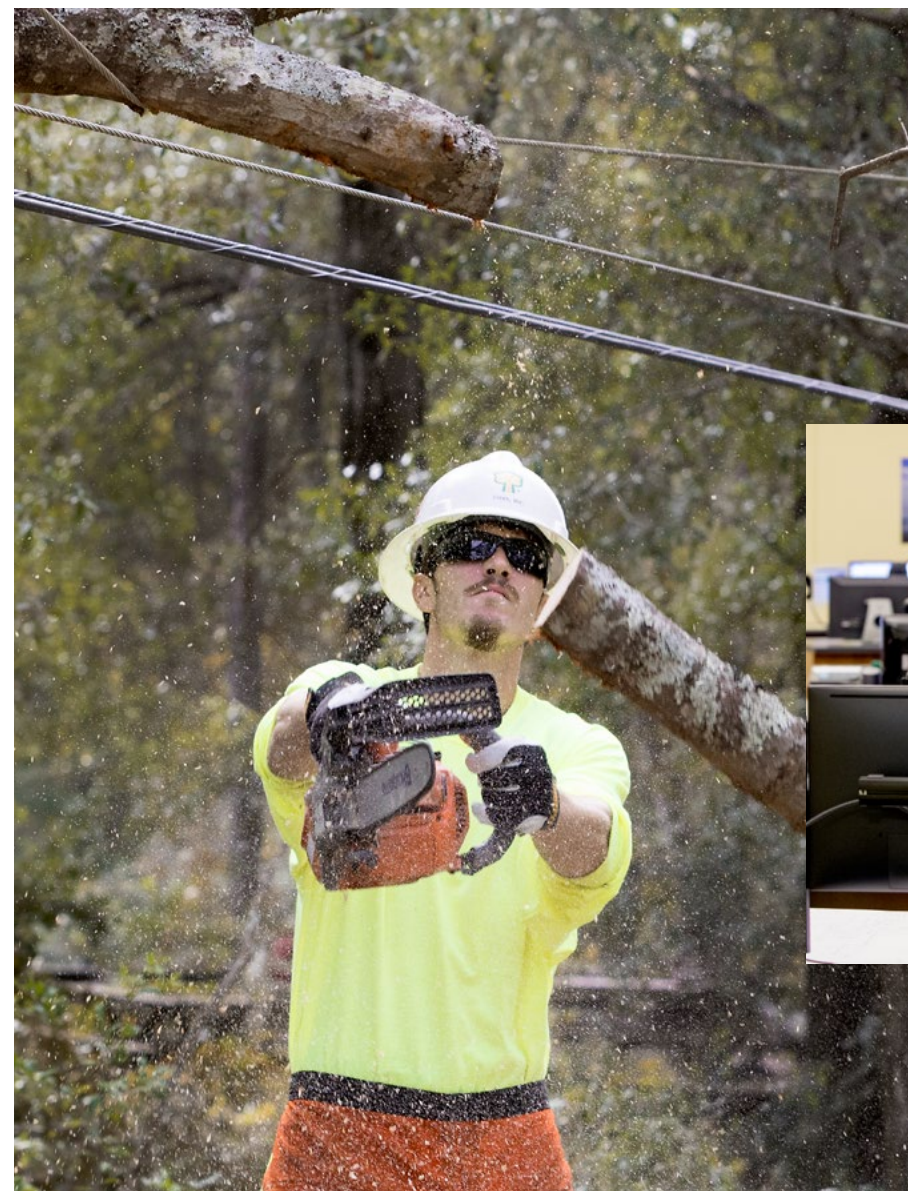
'day jobs.' We had employees with their homes flooded who still came to work to serve our customers, and the teamwork by all units across Santee Cooper was impressive."

On the morning after the storm, helicopter crews began flying transmission lines to spot damage so Santee Cooper could form a battle plan to restore power to the electric cooperatives' delivery points and to substations that serve distribution customers. Distribution crews were riding circuits and working with Storm Center personnel to record damage and prioritize restoration. Reviewing and recording damage is frenzied but vital work, and line crews continued to make repairs as others assessed damage.

Poston said personnel were all focused on the single goal of restoring power. "Everyone had a job to do. Assessment teams were on the ground, crews were repairing lines and customer service representatives were helping customers. We realized it was going to take time and patience to repair lines and equipment, and to restore power safely. It was frustrating at times and we wished we could move faster, but morale was good and each victory, no matter how small, increased our determination."

Operation centers were staffed 24 hours a day and crews worked 16-hour, staggered shifts. It was a flurry of activity that lasted for over a week. Not being able to access areas was the biggest obstacle to repairing equipment and restoring power. Downed trees, high water and sand slowed down progress.

"The conditions that the field personnel worked in were quite challenging. There were large numbers of trees blocking roads and rights-of-way where we needed to get crews and equipment. And there were many flooded areas throughout the state we couldn't access," said Budreau.





From top: Santee Cooper Technical Associate Andy Woolcock, Engineer I Geno Porter and Line Technician A Marshall Hill work on repairing structures on a 230 kV line from Winyah to Charity substation. Hurricane Matthew caused damage at other facilities, including Cross Generating Station in Cross (inset). State officials called in the National Guard to protect residents and clear roadways in Pawleys Island.



Hilton Head Island suffered a lot of damage and had particularly difficult areas for transmission crews to reach. And in Pawleys Island, distribution crews couldn't get to a majority of trouble spots until days after the storm because the National Guard had to clear the roads to make them passable.

As crews energized substations and lines, the operation centers erupted in cheers. As the hours and days wore on and team members became weary and fatigued, high fives and pats on the back were important to morale. But the frequent kind words and encouragement from our customers provided the best reinforcement.

Each day, progress was visible. Transformers, poles and lines were repaired and replaced, and the number of outages steadily decreased as the week progressed.

"It was amazing to see customers bringing food and drinks to line crews and thanking them for being away from their families as they helped bring back power," said Poston. "One customer even fired up a grill on his front lawn and took lunch orders for crews working in his neighborhood. And children drew thank you cards and handed them to workers. Plus, there were hundreds, if not thousands, of 'thank yous' on our social media pages.

"This was the first real 'test' we've had since Hurricane Floyd with restoration efforts lasting for more than a week," said Bell. "Employees who have worked here less than 10 to 15 years got experience that some of us got with Hugo. They got to see all the moving parts come together and although team members did an outstanding job, they will be better prepared for the next one."

"The patience and gratitude from our customers was overwhelming and heartwarming. They are the reason we do what we do."



At left: A mutual aid crew from Pike out of Goldsboro, N.C., along with Santee Cooper Meter Technician A Tim Suggs (far right), meet in Conway with children who drew pictures and wrote letters to line technicians, thanking them for their hard work.

Bringing In BUSINESS

Ritchie McQueeney was on the hunt. He was expanding his business, and he needed a place to put it.

McQueeney expected to build quickly, on land that already had roads, water, sewer and the like. His company, Thermo King Columbia, takes trailers, trucks, vans and railcars and outfits them with refrigeration and other equipment for food transport. He works with some of the biggest names in the business, and he wanted an industrial site that would handle his growth.

"I took my time with it," McQueeney said. "It was a huge decision. I was a 58 year old looking to make an investment like I was 38."

McQueeney connected with Chad T. Lowder, CEO of Tri-County Electric Cooperative, which distributes electricity to a big part of Calhoun County including several potential industrial sites. Lowder showed McQueeney the I-26 Industrial Park, which featured excellent access to Interstate 26. "It didn't have sewer," McQueeney recalled.

They kept looking. In the meantime, Lowder secured a \$305,000 Site Readiness Fund

Grant which, when paired with matching local money, let Calhoun County build a sewer lift station and connect the I-26 Industrial Park to public sewer nearby.

Almost immediately, Thermo King committed to the I-26 Park, as did another expanding Columbia company. Between the two industries, they announced plans



to invest \$8.2 million and hire about 140 people. That equals a big win for Tri-County Electric Cooperative and Calhoun County, and it's one example of how the state's electric cooperatives and Santee Cooper are improving lives across the Palmetto State.

McQueeney has now doubled his facility space from his original location in

Columbia, and he's planning another addition at the Calhoun site. "We're forward facing. We know we can grow now," he said. "The biggest thing for me is I'm more of a sales guy and now I don't have to tell a customer 'no.' We can get things done."

Santee Cooper created its Site Readiness Fund programs in 2014, establishing grants available for high-value projects in co-op territories, within the borders of our municipal wholesale customers, or within our retail customer territory.

James Chavez, who was involved in the grant process for electric cooperatives as president and CEO of the South Carolina Power Team, calls Calhoun's I-26 Industrial Park "a great example of the value of the Site Readiness Fund Grants. That park kept getting looked at, but it kept getting kicked out for one reason – lack of sewer capacity. What this grant program has done is given us a tool to make a difference in these 'but-for' sites."

By providing grant funding for cooperative, municipal and direct-serve sites, Santee Cooper has supported economic

By Mollie Gore

Photography by Paul Zoeller



Ritchie McQueeney, owner of Thermo King of Columbia, shows off one of the many trailers his company has outfitted with a multi-zone refrigeration system to keep food cool.

development across South Carolina – living up to our mission and responsibility to do just that. In addition to its Site Readiness Grants, Santee Cooper also provides attractive power rates for large industry, loans to help counties and cooperatives finance industrial shell buildings, and other incentives to help land new industry and jobs.

Chavez notes that in today’s cutthroat industrial market, “site readiness funding has allowed us to make significant investments in areas where we can get a win. This is a legacy initiative.”

In just two years, Santee Cooper has funded 14 Site Readiness Grants to electric cooperatives, totaling \$18.8 million in South Carolina, including in many rural communities from York to Georgetown

counties. The grants secured another \$52.4 million in local matching funds from those cooperatives and other local partners.

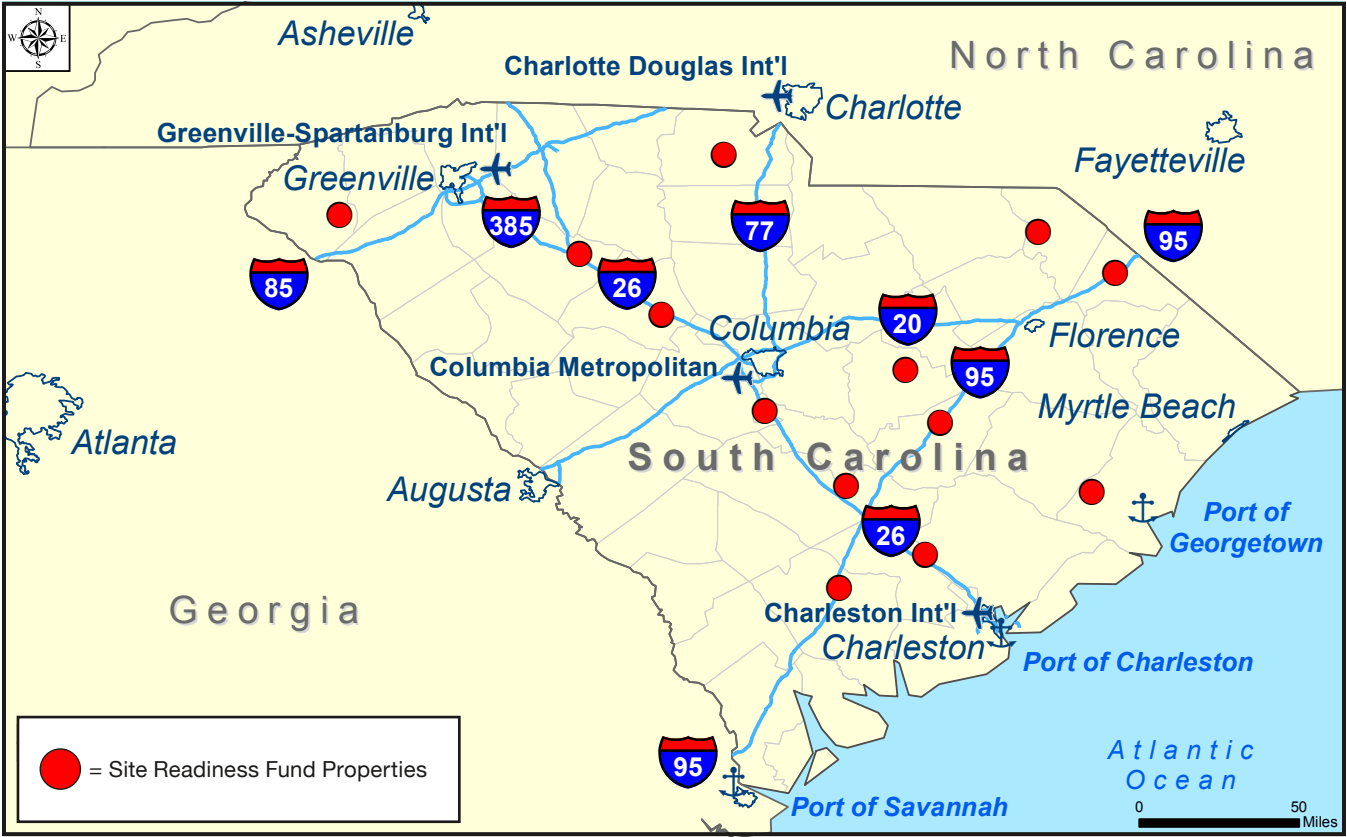
Just last month, Newberry Electric Cooperative used a Site Readiness Grant to help bring MM Technics, a metal stamping company serving auto manufacturers, to Mid-Carolina Commerce Park in Newberry County. The \$625,000 grant, with a \$625,000 local match, will yield a return of \$12.6 million in investment and 65 new jobs.

“The investment that the grants secure is important, but more than that, they are bringing industry to our state, providing jobs for our customers and lifting up entire communities,” said Mike Cool, Santee Cooper manager of economic development. “Part of Santee Cooper’s responsibility is to

promote economic development across the state, and we have formed a very effective team with the the electric cooperatives. This is particularly important in rural parts of the state. The co-ops know these communities, and they have the best vision for how they can create opportunity that will lock in new industries and jobs.”

Lowder has worked in economic development for years. He recognized the Site Readiness Grants as “an excellent resource for counties to develop immediate product.” Product refers to move-in-ready buildings, commerce park sites with concrete pads, and other prime offerings to show industries and site selectors.

Lowder also applied for a Site Readiness Grant to help Orangeburg County improve the entrance to the John W. Matthews



Above: Site Readiness Fund grants to electric cooperatives are creating opportunity for industrial development across South Carolina, as indicated by the red dots on this map.



Above: Ritchie McQueeney, owner of Thermo King of Columbia, talks with Chad Lowder, CEO of Tri-County Electric Cooperative, and Heath Hill, president of the Tri-County Electric Cooperative Board of Trustees.

Industrial Park, which attracted Sigmatex in 2015 and is looking to sign on other industrial tenants. Interest has picked up, in large part because the park entrance provides a great first impression and represents the community well.

“In rural areas especially, you have to invest money and you have to have product,” Lowder said. With the availability of the Site Readiness Grant and other resources from the co-ops and Santee Cooper, counties have become more active in developing

product. For instance, Calhoun County is building its own industrial speculative building to keep the ball rolling.

“Now Tri-County is looking at purchasing and developing a new industrial park,” Lowder said. “It’s an exciting time. I really see good things coming down the next couple of years.”

Black River Electric Cooperative is also working to position its service territory to capture industries looking to relocate.

Charlie Allen, Black River CEO, noted the major role that site selector consultants play in helping industry – especially foreign industry – choose manufacturing locations. That only adds to the hardships for rural areas with few or no developed sites.

“From my perspective, the purpose of these consulting firms is to eliminate sites, to reduce the list,” Allen said. “Everything you can do to keep yourself in the running is a huge, huge help. These grants help us and the community provide some of that



Above: Often, industry is looking for a site as close to move-in ready as possible, which motivated development of this speculative building in Calhoun County adjacent to I-26.

Right: Tri-County Electric Cooperative used site readiness funds to improve the entrance of Matthews Industrial Park.



initial infrastructure, to get into those final rounds where we can start talking about details and working to win a project.”

Allen’s cooperative is purchasing property for its own industrial site as well, in Clarendon County. Working with the county, they are creating road access. The site is next to Interstate 95 and already has rail access, and there are good anchor industries nearby. “Industries like to go where industry already is,” Allen said.

Black River has also used grant funds to clean up a 20-year-old speculative building located in a remote industrial park in Sumter County.

“We cleaned it up, repainted the inside, made it more presentable, repaved the driveway, put a fence around the outside

and provided more security,” Allen said. “We’ve had several people look at it this year, and there is currently one very serious prospect.”

These are exactly the kind of results Santee Cooper had in mind when we created the Site Readiness Fund, and it is gratifying to see the success it is bringing across such a wide field, Cool said.

That’s good news for co-op leaders like Allen.

“I think this program is very important,” he said. “Economic development, especially in some of the rural areas that we serve, has to be a team effort between the co-op, the state and Santee Cooper. It’s a win for everybody when we get an industry in here. It provides jobs for the people who live here, a better tax base to provide services



Above: Mike Cool, economic development manager for Santee Cooper

for the residents, and a better quality of life all the way around.”

2014– 2016 MUNICIPAL SITE READINESS GRANTS

In addition to our electric cooperative grant program, Santee Cooper also offers site readiness grants to municipalities we serve. Here is a look at municipal grants approved to date.

MUNICIPALITY	GRANT	PROJECT
CITY OF CLINTON		
Project 1	\$197,790.....	100,000 sq. ft. industrial pad
Project 2	\$692,993.....	Grading and expanding water and electric services
CITY OF WESTMINSTER	\$750,000	Property acquisition, environmental assessments, remediation and demolition
CITY OF LAURENS	\$200,000	Property development including water and sewer line extensions
HORRY COUNTY	\$900,000.....	Railroad improvements
CITY OF ROCK HILL	\$1,250,000	Site development
CITY OF CLINTON	\$570,000	Park infrastructure

Walter Hill, executive director of the Horry County Museum, demonstrates his blacksmithing skills.

A REAL-LIFE GLIMPSE INTO

Yesteryear

BY WILLARD STRONG

If one could turn back time and return to what our elders often nostalgically characterize as “the good ole days,” what would a rural Horry County farm more than a half-century ago look like?

THE ANSWER CAN BE FOUND JUST A FEW MILES NORTH OF CONWAY, OFF U.S. HIGHWAY 701, IN WHAT’S KNOWN AS THE HOMEWOOD COMMUNITY. THIS IS WHERE THE L.W. PAUL LIVING HISTORY FARM, PART OF THE HORRY COUNTY MUSEUM, IS LOCATED.

The county acquired the property years ago and named it to recognize the generosity of L.W. Paul, an Horry County native from the nearby Pauleys community. Paul contributed all of the construction costs and many of the artifacts.

What has been recreated here is a community in miniature with the focus on what everyday life would have been like on this “one horse family farm” from the years 1900 to 1955. The farm is just a little over seven years old, opening to the public in November 2009.

“The farm covers almost 18 acres in buildings, parking, row crops and pasture,” said Walter Hill, the museum’s executive director. “This is a recreated farmstead exhibiting fields, pastures, houses and outbuildings that would be on every farm, as well as community structures that would have been part of every farm community but not part of every farm: a church, syrup shed, gristmill, woodworking shop, blacksmith shop and sawmill.”

During each season, the farm hosts an event paying homage to the seasonal aspect of rural life. Nov. 19 was the annual “syrup day,” when sugar cane grown onsite is cooked down from raw juice into the highly prized sweet cane syrup.

PHOTOGRAPHY BY PAUL ZOELLER

Said Hill, “Sugar cane is an Asian grass that grows to very large sizes and can develop a sugar content as high as 10 percent. Cane syrup making starts, of course, with sugar cane. Sugar cane is grown on our farm and was grown by most farmers in Horry County historically. They did not, however, grow this crop as a cash crop.

“In our area of the U.S., we usually experience killing frost in November, which forces the cane to go dormant and cease sugar production. The cane grows back from the remaining stubble in the following spring. If that stubble freezes it can die and never come back. The result is that farmers in this region could grow cane and could propagate it from year to year. However, they did not get as high yields and risked losing the entire crop in a bad-freezing winter.”

Other traditional activities are also held during the farm’s syrup day. Demonstrations include blacksmithing, corn grinding, cooking on a wood stove, butter making and last but not least, clothes washing during a time when the iconic Maytag repair man was decades in the future.

Demonstrating this tedious task of farm life is Hillary Winburn, the museum’s curator, who also helps out at the farm’s three other seasonal events. Her attire is a simple dress that personifies an Horry County farm woman.

“It is always fun demonstrating washing clothes by hand on the farm,” Winburn said. “It is funny when children give me a strange look and ask, ‘What are you doing?’ They are always surprised with all the hard work and time that went into washing clothes by hand during this time. Washing clothes would have been an all-day chore, a chore many of the children or other family members would have helped with. Clothes were typically washed once a week, with Mondays being reserved for the task of ‘wash day.’

“Clothes would have been separated into whites and colors. Heavily soiled items such as work clothes, undergarments and diapers would be boiled in a large pot of soapy water for sanitizing and loosening the dirt. Lye soap would have been used in the washing process.

making soap



Soap, an essential part of everyone’s daily life, didn’t always come from a grocery store shelf.



Octagon soap, a commercial brand of soap, was available during this time and is still available today at some grocery stores. However, buying soap was not always an option. In these cases, the soap would have been made on the farm using hog lard and lye.

“The soap I use in my demonstration is made here at the farm. Now, using the lye soap one would scrub the clothes on a washboard of glass or galvanized tin in a tub of soapy water. I tell visitors like my grandparents told me, ‘You had to use a lot of elbow grease.’ Once scrubbed, clothes were then dipped several times into a tub of clean water for rinsing out the soap. The wet clothes were then wrung out by hand. In some cases, families had a wringer that would wring the water from the clothes before hanging them on the clothes line to air dry.”

One thing that changed wash day forever for rural families was the electric washing machine.

But first, a farm had to have electricity, wishful thinking among many farm folk in Horry County. Today, Santee Cooper serves the farm along this stretch of U.S. Highway 701.

Having the ability to electrify their farms made farmers more productive and prosperous. The assertion can be easily made that access to reliable and affordable power raised the standard of living for rural Americans more than any single thing in the last 100 years except for, perhaps, the gasoline-powered tractor.

Why was the 1900–1955 timeframe selected? “We selected this timeframe for several reasons,” Hill said. “One, residents, tourists and students in South Carolina can visit historic sites that interpret the history of our state from pre-colonization on up until Reconstruction. There were no sites in South Carolina that were interpreting the early 20th-century era of history. Two, much of the collection Larry

Hillary Winburn, Horry County Museum curator, shows how wash day was done back in the day.

THE ROLE OF SUGAR CANE IN A FARM COMMUNITY

When cane syrup is made, the farmer starts by stripping and topping the cane. This consists of using a knife or cane knife to strip the leaves or blades from the stalk and cut the top off above the mature stalk. The stalk is then cut from the stubble near the ground.

These stalks are covered and taken to the cane mill. The mills, during this time period, were horse-powered or belt-driven by machine. Most common were the one or two horse-powered mills.

The animal power is hitched to a beam coming down from the center of the mill. As the animal walks around in circles, the geared mill transfers the energy to three large iron cylinders inside the mill. The operator feeds stalks of cane into the cylinders and they are pulled through and crushed. The sugar-rich sap runs out and is collected.

The juice is poured into the kettle and a fire is lit under it. As the juice heats up several things begin to happen. First, and most important, the water starts to evaporate leaving behind sugar-rich syrup. Second, the "impurities," waxes from the stalk, fibers and other organics begin to rise to the surface. The cooker skims this foam off.

After hours of the skimming and evaporating, the end goal is to have a syrup that is a beautiful clear amber color and has a higher sugar content than water content.

Syrup making became a big social event. It was special to the farming families for several reasons. Maybe most importantly was that the homemade syrup was a staple of sweetness for the rest of the year. Sweet daily snacks typically consisted simply of eating a biscuit with cane syrup poured over the top. The annual cane syrup cooking became a small celebration in a community. Someone in the community would own a mill and kettle.

grinding sugar cane

Everyone else would grow their cane and bring it to that person at separate times. They would grind and cook the cane for a share of the finished syrup.

The changing cool weather provided relief from the summer heat and the farm community took some time to relax. Since the process of cooking a kettle of syrup took six to eight hours of tedious monitoring, it forced people to stay and encouraged fellowship around the cooking. This atmosphere lent itself well to cooking a chicken bog, playing music, sharing stories, and maybe even making candy out of last year's syrup. In rural communities it became an icon of fall celebration and community.

*Source: Walter Hill, Executive Director,
Horry County Museum*



*seen
around
the
farm*



Grinding ears of corn, raising chickens, using an outhouse, tending to mules and maintaining a tobacco barn were once all common scenes in rural Horry County.



(Paul) had put together reflected things that were reminders of his youth. Largely, the collection he was donating was from this time period.

“Three, this era saw many changes and these changes made a huge difference in Horry County. Prior to World War II, most families lived like what we recreate on our farm. When Larry grew up, 80 percent or more of the people in Horry County lived on small farms like ours. However by the 1950s we saw major changes in agricultural technology and lifestyles.

“By the time he was raising a family, less than 20 percent of the people in Horry County lived like this. Agricultural methods and cultures changed due to modernization, tourism, etc. So, one can ask, if this much change takes place in one place in one generation, how long before it is all changed and how will we remember that period?

“It was important to our museum and to Larry to build a site that reflected this period in history and to take advantage of interpreting and documenting what people who lived here during that era did. Our living history is often being relived by those who grew up doing it. The authenticity of our interpretation is clearly defined because it is being ‘written’ by those who lived it. That makes this type of museum in this type of place very unique.”

Above:
Syrup from
sugar cane
made many
a meal
so much
sweeter.

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BY SUSAN MUNGO

GOING

President John F. Kennedy is quoted as saying “Change is the law of life and those who look only to the past or present are certain to miss the future.” The residents of Pawleys Island know something about change and are making a change that will benefit future generations. They are embracing a new look on the island they call home. It’s a look that honors the island’s past, its mission and its culture. It also welcomes in a more reliable future.

The residents of Pawleys Island are working together to bury utility lines beneath the sand that has covered their property for hundreds of years. When complete, the project will offer an unobstructed view of the beauty of the island.

Franchise conversion projects, or converting overhead distribution power lines to underground power lines, take place in many cities and towns that Santee Cooper serves. Depending on the particular franchise contract, many entities use the franchise fee money collected

and matched by Santee Cooper to bury sections of utility lines in their communities.

The decision to put utility lines underground is a decision many find easy to make. “It may be because in addition to the aesthetics, underground power lines generally have reduced outages resulting in increased reliability,” said Neil James, manager of distribution operations for Santee Cooper. “While not immune to equipment failures and outages associated with dig-ins, they have limited exposure to outage-causing culprits such as trees, lightning, wind and animals.”

Just like the town, the Pawleys Island project is very unique. For one, this whole island is predominately residential, where other cities and towns typically convert Main Street, downtown or commercial areas along the Grand Strand to underground power lines.

Mayor William Otis was a true visionary for the Pawleys project. He believed the residents would

Overhead power lines are an everyday sight. Soon, Pawleys Island residents will have a new look as the island converts to underground power lines.



UNDERGROUND

PHOTOGRAPHY BY
PAUL ZOELLER

Santee Cooper Construction and Maintenance Planner Donnie Sellers and Mike Lockamy with Sumter Utilities discuss some of the day-to-day challenges of pulling cable underground along Atlantic Avenue in Pawleys Island.



“IT HAS KEPT US ON OUR TOES, BUT THE GOAL WAS TO MINIMIZE OUR IMPACT ON THE RESIDENTS AND MAINTAIN THE PRISTINE LOOK OF THIS BEAUTIFUL PLACE.”

Donnie Sellers, Construction and Maintenance Planner

be happy with the results if he could help them see that it would not disturb the look and feel of the land they call home. Otis is happy the project is moving along and very proud of how the community has united to make this a reality.

“Pawleys Island is a community of property and homeowners coming together to make these changes that give them the improved look and reliability of underground lines,” he said. “But more importantly, they are doing it in a way that maintains the integrity, grace and history of the island we love.”

One of the first things that had to be decided was how to fund the project. There was money available in their franchise fund but not nearly enough to cover the costs associated with burying over 30 miles of lines and conduit on an island less than four miles long. Although they were embarking on a major new conversion plan, changing overhead to underground lines was a project the Town of Pawleys Island had really been working on for years.

Power lines first appeared on the island in the early-1900s, allowing for electric appliances, lights, heating and air conditioning. In the mid

Richie Shelley with Sumter Utilities, the company contracted for the Pawleys Island project, pushes wire through conduit in a subsurface enclosure. These enclosures keep site lines clean and reduce the visual disturbance of the underground lines and equipment.



to late 90s, a small group of 25 property owners requested to have lines buried underground on their property and paid for the conversion themselves. Then in 2009, Santee Cooper began converting a section that included a portion of the historical district from the South Causeway Road to an area known as the Birds Nest. There were 52 property owners who split the cost with the town to complete this conversion project. Once this section was completed and residents on the island saw the difference it made, the remaining homeowners began to consider the benefits of converting the entire island to underground power.

In 2013 town officials, including the mayor and the town council, met with Santee Cooper to discuss financing possibilities for putting electrical structures underground on the remainder of the island. In addition, the town wanted to make sure it made any assessed homeowner fees fair to those who had previously paid to have underground installations. The group decided Santee Cooper would use available franchise money and the town and its residents would split the remainder of the cost.

“After evaluating multiple payment options and phasing scenarios, the Town of Pawleys Island

Ryan Fabbri with the Town of Pawley's Island and Santee Cooper Engineer III David Robinett meet regularly to discuss the underground conversion project. They are optimistic the project will finish in 2018.



agreed to finance this project on their own,” said Ray Pinson, manager of local government and community relations for Santee Cooper. “We are satisfied that the town moved forward with the option that works best for the largest majority of residents.”

Once the funding was in place, the first phase of the project began. With it came the challenge of placing lines underground without disturbing the natural landscape. But before the first line could be buried, permits and easements had to be obtained.

This meant Santee Cooper and the Town of Pawleys Island had to work with homeowners to obtain more than 420 individual property easements, which is quite a different process than when a city or state can grant a blanket easement for this type of underground access.

“Almost every homeowner approaches this process differently,” said Pawleys Island Town Administrator Ryan Fabbri. “But at the end of the day, we have been able to work through each and every issue and guide them through the process so that they understand what we need and what it will accomplish.”

David Robinett, engineer III with Santee Cooper, has been working closely with Fabbri for years. As they see each phase completed they are encouraged that the entire project will finish on time, which should be by summer 2018. Like most conversion projects, work has to stop between Memorial Day and Labor Day because of tourist season, adding to the pressure of getting as much done as possible in the off season.

“Other challenges we have faced are obtaining proper environmental permits. For example,

Army Corps of Engineers permits for the North and South Causeways and the Pritchard Street and Waterford Road bores under the marsh had to be obtained,” said Robinett. “We have also made sure proper erosion control, like mats and silt fencing around delineated wetland areas, are in place, inspected and maintained.”

In addition to the items above, Santee Cooper was involved in the design of this project. “Our design and construction team assisted the town with design decisions on the Pawleys Island conversion project,” said Gregg Turbeville, general supervisor of distribution design for Santee Cooper. “We were able to use our expertise and skill sets from other franchise projects, and from our own internal projects, to assist them in completing the various stages of this conversion.”

Construction and Maintenance Planner Donnie Sellers has been supervising the contract crews working on the island. Their job is to bring to fruition what the design team has created. Sellers knew the Santee Cooper design team was determined to maintain the aesthetics of the island. They accomplished this with the use of subsurface enclosures where possible

and elected to bore in conduit rather than dig trenches, place conduit and then backfill. The crews working to bore conduit also placed conduit for phone and cable, which helped minimize the disturbance impact on the homeowners.

“It has kept us on our toes, but the goal was to minimize our impact on the residents and maintain the pristine look of this beautiful place,” said Sellers. “When we have completed our work, we will have accomplished what we set out to do.”

The residents of Pawleys Island have dealt with the winds of change and at the end of the day, sometime in 2018, they will have an underground distribution electrical system that provides improved redundancy, is safer and also promotes their mission, which is to protect and maintain the beauty and history of their island.

Santee Cooper also has franchise conversion projects currently underway in Conway, North Myrtle Beach, Myrtle Beach, Moncks Corner and Surfside Beach.

**“BUT MORE IMPORTANTLY,
THEY ARE DOING IT IN A WAY
THAT MAINTAINS THE INTEGRITY,
GRACE AND HISTORY OF
THE ISLAND WE LOVE.”**

Mayor
William
Otis

Santee Cooper Board approves 2017 budget

In its 2017 spending plan approved Dec. 5, the Santee Cooper Board of Directors held operating and maintenance costs to 2016 levels. The Board also approved capital investments in new nuclear generation and improvements to the utility's electric grid and environmental controls. The Board also approved the 2018 and 2019 budgets for planning purposes.

This year's budget totals \$3.2 billion and includes \$1.8 billion for the electric system, \$9.1 million for the water systems and \$1.4 billion for capital expenditures. Approximately 41 percent of the \$1.8 billion electric system budget is allocated for fuel and purchased power.

"Even as our investment in expanding the V.C. Summer Nuclear Station grows, Santee Cooper employees are continuing to save money in operations and fuel spending," said Lonnie Carter, Santee Cooper president and CEO. "These cost savings, along with excellent debt management, are minimizing customer impacts in the short term, while we build nuclear generation and make system improvements that will provide clean, reliable and affordable electricity for the long term."

Incentives increased for community, rooftop solar programs

Santee Cooper customers who install rooftop solar panels or buy into Solar Share, the utility's community solar project, will see their solar investment pay off much sooner under new incentives the Santee Cooper Board of Directors approved on Dec. 5

New incentives include larger per-watt rebates. The rebate for Solar Home and Solar Business customers who install rooftop panels is now \$1.60 per watt, up from \$1.30. The rebate for customers who invest in Solar Share community solar is now \$1.40 per watt, up from \$1. Also, rebates are now applicable for up to 6-kilowatt installations, where the programs originally limited rebates to 4 kW of installed capacity.

"We launched these programs last spring to help our customers invest in solar power and cut their electric bills over the life of the program," said Lonnie Carter, Santee Cooper president and CEO. "With good feedback from our customers, we've made the programs even better. These new incentives cut in half, approximately, the time it takes the solar investment to pay for itself."

Under the new incentives, a customer who purchases a 17-year, 4-kW Solar Share subscription could recover that investment in just under five years.

The Santee Cooper Board will reassess the terms of Solar Share, Solar Home and Solar Business at least annually going forward. To learn more or to get in touch with a Santee Cooper energy adviser, visit www.santeecoopersolar.com

Business Briefly

SCE&G hosts media day at V.C. Summer

S.C. Electric & Gas Co. hosted a media day Sept. 21 at the worksite of the two new units under construction at the V.C. Summer Nuclear Station in Fairfield County.

Santee Cooper President and CEO Lonnie Carter and Kevin Marsh, president and CEO of SCE&G's parent firm, SCANA Corp., were onsite at the event.

Units 2 and 3 are rated at 1,117 megawatts each and are projected to enter commercial operation in 2019 and 2020, respectively. As of Sept. 1, Unit 2 is approximately 25 percent complete, and Unit 3 is at about 10 percent.

The cost of the project is approximately \$13.8 billion. Santee Cooper will eventually own 40 percent of the two units' rated generating capability.

Summer Station's Unit 1 entered commercial operation on Jan. 1, 1984. Santee Cooper owns one-third of the station's generating capability, rated at 966 MWs.

Revolutionary War fort will be an attraction at Old Santee Canal Park

Fort Fair Lawn, a nearly forgotten, intact British earthen fort from the American Revolution, will in the coming years be accessible to the public via a walkway from Old Santee Canal Park, it was announced Nov. 17.

The fort's \$2 million acquisition includes an 80-acre wooded tract surrounded by Moncks Corner's Stony Landing subdivision. The fort, about 600 feet from the Cooper River, stored muskets, powder and lead shot, and featured at least one artillery piece. Soldiers camped outside the fort.

Of the more than 30 forts constructed during the Southern campaign of the American Revolution, only two remain in their original condition: Fort Fair Lawn and the Ninety Six National Historic Site.

The acquisition was made possible through grants from the S.C. Conservation Bank, the National Park Service's American Battlefield Protection Program and the S.C. State Ports Authority's Cooper River mitigation program. The Coastal Community Foundation also provided funding through its Conservation Loan program. Santee Cooper and the Civil War Trust's Campaign of 1776 also contributed to the project. The property was acquired from local landowner and businessman John Cumbie, one of the founders of the Berkeley County Museum and Heritage Center.

Over the next year, the partners will conduct a thorough archaeological review of the site and design a master plan for the property, with the goal of making the site accessible to the public by early 2018. The property will be managed by Santee Cooper as an expansion of Old Santee Canal Park.



EmPowering new business

Before the first aircraft flew, and before people showed up to their new job, Santee Cooper helped power **Executive HeliJet's** expansion to Myrtle Beach, creating a \$1 million economic partnership for South Carolina.

Since 1988, we've been a driving force behind more than \$11 billion in industrial investments that have produced over 67,000 new jobs. And we're not slowing down. With our low-cost, reliable power, creative incentive packages and diverse property portfolio, Santee Cooper, working with the South Carolina Power Team and the state's electric cooperatives, continues to power South Carolina toward **Brighter Tomorrows, Today.**



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